



# Enemy Agents

# Overview



- **Smokeless Tobacco**
- **Alcohol**
- **Antihistamines**
- **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)**
- **Steroids**
- **Multi-Ingredient Steroid Alternatives**
- **Ephedra**



# Smokeless Tobacco (ST)



## Negative health effects

- **50X higher risk for mouth cancer**
  - ***Contains 28 cancer-causing chemicals***
- **Permanent tooth stains**
- **Bad breath**
- **Lip and mouth sores**
- **Tooth decay**
- ▢ **↑ blood pressure and heart rate**
- ▢ **↑ levels of LDL (bad) cholesterol**





# Nicotine and ST



- **Reported “benefits”**
  - **Decreased appetite**
  - **Maintenance or reduction in body weight**
  - **Enhances attention**
  - **↑ energy**
  - **↓ pain**
- **Detrimental effects**
  - **↑ blood pressure, heart rate, and breathing rate**
  - **Tightens blood vessels**
  - **Stimulates central nervous system**
  - **Permanent tooth stains**





# CHAMP Withdrawal and ST



- **Nicotine withdrawal**

- Nicotine usage results in drug dependence
- Cessation of nicotine results in withdrawal symptoms:

- *Irritability*
- *Anxiety*
- *Depression*
- *Moodiness*
- *Headaches*
- *Trouble sleeping*
- *Poor concentration*
- *Craving for nicotine*
- *Increased body weight*

- **RISKS > BENEFITS**



# Alcohol



- **Heavy drinking is a major cause of preventable death!**
- **Effects on health include:**
  - **Damage to heart, liver, and skeletal muscles**
  - ▮ **↑ risk for some cancers**
  - ▮ **↑ violence**
  - **Interferes with relationships**
  - **Dehydration**
  - **Negatively affects energy processes**
  - ▮ **↑ injury rate**
  - **Alcohol-drug interactions**





- **Prevalent among all groups of people**
  - Common over-the-counter and prescription medications
- **Effects on health:**
  - **↓ ability to concentrate**
  - Delayed reaction time
  - Sleepiness
  - Dry mouth
  - **↑ heart rate**
  - Blurred vision
  - Constipation



# NSAIDs or Vitamin M



- **Uses**
  - Treat pain
  - Reduce fever/ inflammation
- **Should be used on a limited basis!**





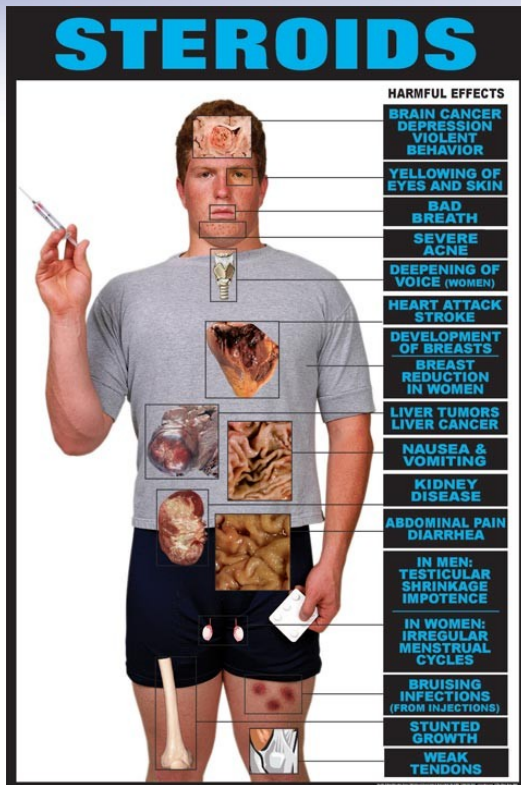


# **Negative Effects of Regular NSAID Use**



- ✂️↓ **effectiveness of daily aspirin use**
- **Gastrointestinal bleeding and ulcers**
  - **May lower serum sodium levels in athletes**
  - **Contribute to performance and health decrements of athletes**
  - **Delays healing of muscle, cartilage, ligaments, and tendons**

# Anabolic-Androgenic Steroids



- “Designed” to act like testosterone
- Used illegally by athletes to enhance performance and/or improve physical performance because it
  - Increases body mass, lean body mass, strength, and power and
  - Decreases body fat
- Banned by most athletic associations
- Anabolic Steroid Control Act of 2004

# Steroids

## (Anabolic-Androgenic)



- **Usage methods**
  - **Cycling**
  - **Stacking**
  - **Pyramiding**



# Cycling and Steroids



- **Multiple doses are taken over a period of time and then stopped for a specific time before beginning a new cycle**
  - A 10 - 12 week application of a single compound, or
  - Combination of different steroids
  - Followed by stopping all steroids for a period of time
- **Purpose:**
  - Reduce risk of side effects







# Stacking and Steroids



- **When two or more types of steroids are taken at the same to increase the effectiveness**
- **Oral and injection drugs may be mixed**
  - **This method is commonly used by steroid (ab)users**
- **Different types are used so drug tests are passed**

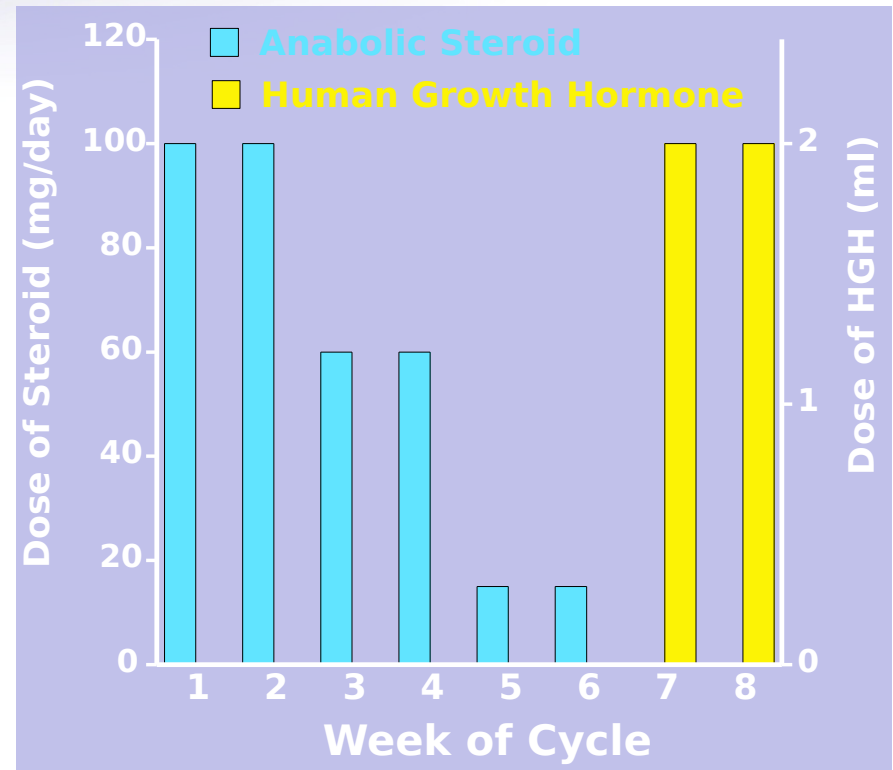


# Pyramiding and Steroids



- **Various paradigms:**

- ▢ **↑ frequency/dosage**
- **Add various types of steroids**
- **Followed by ↓ dose and frequency until no drugs are used**





# Health Risks of Anabolic Steroids



<b>Hormonal System</b>	<b>Cardiovascular System</b>	<b>Liver</b>
<b>Shrinking testicles</b>	<b>↑ in LDL (bad) and ↓ in HDL (good) cholesterol</b>	<b>Cancer (prostate, pancreatic)</b>
<b>Breast enlargement</b>	<b>High blood pressure</b>	<b>Tumor(s)</b>
<b>Infertility</b>	<b>Heart attack</b>	
<b>Male-pattern-baldness</b>	<b>Enlargement of heart</b>	<b>Psychiatric</b>
<b>Skin</b>	<b>Infection</b>	<b>Mania</b>
<b>Severe acne</b>	<b>HIV/AIDS</b>	<b>Delusions</b>
<b>Fluid retention</b>	<b>Hepatitis</b>	<b>Rage</b>
<b>Oily scalp</b>	<b>High blood pressure</b>	<b>Aggressive behavior</b>
<b>Jaundice</b>		



# Concerns with Multi-Ingredient Steroid Alternatives



- **Not properly tested**
- **Absolutely no basis to substantiate claims**
- **Potential for:**
  - **Harmful side effects, allergic reactions, and toxicities**
- **Metabolic pathways and waste products from some compounds are unknown**
  - **Expensive and unlikely to replace benefits of a good diet and sound training program**





# Ephedra



- **Herb containing several substances called ephedra alkaloids (epinephrine and pseudoephedrine)**
- **Multiple adverse effects reported**
- **FDA concluded in 2004 that ephedra alkaloids pose a risk of serious adverse events**
- **Ephedra is illegal!**





# Key Points



- **Tobacco is addictive and can cause cancer**
- **Alcohol, in excess, can lead to dehydration and compromise performance**
- **OTC drugs (antihistamines, NSAIDs, and aspirin) should be used in moderation**
- **NSAIDs should be limited during deployments because they interfere with bleeding control**
- **Steroids are illegal and unsafe**
- **Steroid alternatives are to be avoided**

